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10/578,124	12/05/2006	Emil Enz	GIL-17254	4986

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EXAMINER	
ROY, SIKHA	

ART UNIT	PAPER NUMBER
2879	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,124	ENZ ET AL.	
	Examiner	Art Unit	
	Sikha Roy	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The Amendment, filed on September 24, 2009 has been entered and acknowledged by the Examiner.

Cancellation of claim 3 and addition of claim 11 have been entered.

Claims 1,2, and 4-11 are pending in the instant application.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested:

--- ELECTROLUMINESCENT SYSTEM WITH TRANSPARENT ELECTRODES CAPABLE OF CHANGING LUMINESCENCENT COLOR---

Claim Objections

Claims 2 and 10 are objected to because of the following informalities:

In these claims 'light layers' have been used which should be replaced by 'luminescent layers'. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1,2,4-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claims 1 and 7, the limitation reciting '**activatible by alternating current**' was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession and hence is considered as new matter. The specification only discloses (page 2 lines 23-30) two voltages sources connected in series, and how they are connected with the electrodes to provide voltage to control the emission from the luminescent layers.

Claims 2,4-6,11 and 8-10 are rejected because of their dependency status from claims 1 and 7 respectively.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 recites the limitation "**the** large surface of a layer of luminescent dielectric facing away from the first flat electrode" in line 10. There is insufficient antecedent basis for this limitation in the claim. There is mention of large surface of the first flat electrode but not that of the dielectric luminescent layer. For continuing examination 'a large surface of the layer of luminescent dielectric' is considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4,741,976 to Eguchi et al.

Regarding claim 1 Eguchi discloses (Fig. 1 col. 3 lines 24-56, col. 22 lines 40-68, col. 23 lines 21-30) an EL system comprising an EL device which is activatible by alternating current, having a first electrode 1 having one large surface and comprising transparent material, wherein allocated to the at least one large surface of the first electrode is a layer of luminescent dielectric 4 such that at least one luminescent layer is transparent and a second electrode 3 on the surface of the luminescent layer 4 facing away from the electrode 1.

Regarding claim 4 Eguchi discloses (col. 3 lines 53-56) the luminescent layers 4,5 made of material which can emit light at different wavelengths.

Regarding claim 6 Eguchi discloses (col. 4 lines 23-30) the EL device comprises a device for generation of electrical field by application of voltages across the electrodes so as to control luminescent layers emitting light.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,741,976 to Eguchi et al.

Regarding claims 2 and 11 Eguchi discloses two transparent luminescent dielectric layers 4,5 lying above one another and between the pair of the dielectric layers is arranged a transparent electrode 3 and the outer surface of the outside luminescent layer 5 comprises electrode 2.

Eguchi discloses the invention except for more than two (three for claim 11) transparent dielectric luminescent layers lying above one another and having a transparent electrode in between. It would have been obvious to one having one having ordinary skill in the art at the time the invention was made, to add one more layer of dielectric luminescent above dielectric luminescent layer 5 and having a transparent electrode on the outside since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. Furthermore the Examiner notes it is known in the art of display devices to include plurality of luminescent layers emitting different luminescent colors separated by plurality of electrodes to provide multicolor device as evidenced by USPN 6,566,806 to Kawai.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,741,976 to Eguchi et al. as applied to claim1 above, and further in view of USPN 6,465,951 to Krafcik et al.

Regarding claim 5 Eguchi is silent about the EL device electroluminescence device has at least one point with a three-dimensional deformation, that this deformation has a radius which is less than 1 mm, and that at this deformed point are connected at least two sections 28, 29 of the EL device, between which extends an angle which can amount to 90°.

Krafcik in same field of endeavor discloses (Figs. 6,7,15 col. 9 lines 1-17, col. 10 lines 25-63) EL lamps formed on flexible substrate so that has one point has three-dimensional deformation with small radius of deformation (multi-lamp flexible module may be deformed or flexed to the extent that regions having small radius of curvature exist) , and at this deformed point are connected two points making an angle. Krafcik teaches this configuration provides a lamp with any desired three-dimensional shape maintaining operational integrity.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the EL device of Eguchi formed on flexible substrate so that has one point has three-dimensional deformation with small radius of deformation and at this deformed point are connected two points making an angle amounting to 90°as suggested by Krafcik for providing an EL lamp with any desired three-dimensional shape maintaining operational integrity. Eguchi as modified by Krafcik discloses the invention except the radius of deformation less than 1mm and two points connected to

the deformation point making an angle amounting to 90°. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980). Thus, it would have been obvious to one of ordinary skills in the art at the time the invention was made to specify the radius of deformation less than 1mm and two points connected to the deformation point making an angle amounting to 90°, since discovering an optimum value of a result variable is considered within the skills of the art.

Claims 7,8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,054,809 to Haynes et al., and further in view of US Pub 2003/0042845 to Pires et al.

Regarding claim 7 Haynes discloses (Fig. 6 col. 1 lines 35-37) an electroluminescent system comprising an electroluminescent device 330 activatible by alternating current, comprising at least one layer 30 of luminescent material and one dielectric layer wherein an electrode is allocated to each of the large surfaces of the luminescent layer, wherein the electrode includes a set of parallel strips of electrically conductive material wherein the sets of strips are perpendicular to one other. Haynes further discloses (Fig. 15A) a control device 1050 is provided to individually connect the electrode strips.

Haynes discloses separate luminescent layer and a dielectric layer. Pires in same field of endeavor of EL lamp discloses (para [0003]) EL lamp essentially is a capacitor having a dielectric layer between two conductive electrodes, the dielectric

layer includes a phosphor powder or there is a separate layer of phosphor powder adjacent to the dielectric layer. Hence it would be obvious to one of ordinary skill in the art at the time of invention to substitute separate dielectric and phosphor layers of Haynes by one dielectric luminescent layer as taught by Pires as their uses are known to be equivalent in the art.

Regarding claim 8 Haynes discloses the luminescent layer is a cohesive layer.

Regarding claim 10 Haynes discloses (fig. 2) the device further comprises one reflective layer 110 affixed to the EL device wherein the surface of the reflective layer faces the luminescent layer 30.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,054,809 to Haynes et al., US Pub 2003/0042845 to Pires et al. and further in view of USPN 4,741,976 to Eguchi et al.

Regarding claim 9 Haynes and Pires are silent regarding plurality of transparent layers of luminescent dielectric layers stacked one above another wherein the luminescent dielectric compositions can emit light of different wavelengths and between each pair of dielectric layers is arranged a strip electrode and the outermost surface comprises a strip electrode.

Eguchi in same field of endeavor discloses (Figs. 1, 2) an EL device comprising plurality of transparent layers of luminescent dielectric layers 4,5 stacked one above another wherein the luminescent dielectric compositions can emit light of different wavelengths and between each pair of dielectric layers is arranged a strip electrode and the outermost surface comprises a strip electrode. Eguchi submits (col. 2 lines 38-51)

this configuration provides a device having a structure capable of changing luminescent color, controlling the tone and intensity of luminescence and producing easily at low cost.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the at least one dielectric luminescent layer of Haynes and Pires to plurality of transparent layers of luminescent dielectric layers stacked one above another wherein the luminescent dielectric compositions can emit light of different wavelengths and between each pair of dielectric layers is arranged a strip electrode and the outermost surface comprises a strip electrode as disclosed by Eguchi for providing a device having a structure capable of changing luminescent color, controlling the tone and intensity of luminescence and producing easily at low cost.

Response to Arguments

Applicant's arguments filed September 24, 2009 regarding claim 1 have been fully considered but they are not persuasive.

In response to Applicant's argument that Eguchi discloses organic light emititng devices which are activated by direct voltage the Examiner respectfully disagrees. Eguchi discloses (col. 23 lines 21-30) the EL device can be operated by applying direct current or alternate current or pulse voltage between the electrodes 1 and 3 and the Examiner asserts that the rejection of claim 1 is proper.

Applicant's arguments with respect to claim7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sikha Roy/
Primary Examiner, Art Unit 2879